Resource Action Identification Form

It is anticipated that potential Resource Actions may be very preliminary at this stage. Please fill out as many sections as possible (understanding that you may not have this information or it may not be available) but, at a minimum, sections 1, 2, and 3. Resource Actions may be refined, reviewed and parked over time through Work Group, Plenary and Settlement discussions.

1. **Name of Proposed Resource Action:**
   a. Name of proposed Resource Action: _____
   Stabilize Cultural Resource Sites Subject to Lake-level Fluctuations and Other Facility-related Impacts

2. **Proposed Resource Action – Please describe and include the following:**
   a. Describe the proposed Resource Action in as much detail as practical:
   This proposed action follows the general guidelines developed as part of the Lake Oroville project by Mark Selverston and Robert Thorne (2002) *Draft Archaeological Site Conservation in the Lake Oroville Facilities Relicensing Project Area*. These authors found that sedimentation, saturation (and drying followed by more saturation), shoreline waves from natural and human causes, and wind exposure lead to archaeological and/or Traditional Cultural Property site degradation. We would add sheet erosion, rilling and gulleying to this list. Other impacts from visitation (such as OHV damage) and vandalism/looting will need to be ameliorated. Potential solutions to this continued heritage loss vary depending on the archaeological/TCP site and its placement relative to the fluctuating lake level and areas of visitation above the high water line. Above the high lake level (where sites are affected by base level changes, recreation-oriented activities, etc.) there are a number of actions that can be implemented including vegetation planting, fencing, signing, erosion control, site burial, monitoring and, as last resort, data recovery. Following the 2002 draft report: "Site burial is likely the only effective measure for preserving resources…" Site burial includes a cover or revetment, depending on slope gradient that will buffer mechanical effects of inundation or other damaging forces. These vary from soft earth burial to rip-rap and are spelled out in detail by Selverston and Thorne. Filter cloth; earth, gravel and larger rock cover; gabions, bulkheads, bank crib with cover log, fiber rolls, sprigging, sodding, reed rolls, willow barriers, willow fascine, etc are some of the possible techniques that can be applied. Each site will present different challenges and approaches and should be individually appraised by a multidisciplinary team (archaeologist, geologist, Native American Indian, DWR/DPR representative and an engineer). **This involves a separate study**. More general application in lake areas may be applicable such as log floats to lessen boat waves and speed limits on boat activities in certain areas during certain water levels and perhaps even prohibitions to boating in select zones. In areas where rock features such as bedrock mortars and

petroglyphs are experiencing decomposition and weathering due to lake level fluctuations or vandalism or other negative forces (especially where granite is involved), studies can be conducted regarding rock consolidation and , in cases, possible removal of the feature to a more protected locale. Such consolidation studies would have to be first conducted by a conservator, such as one from the Getty Institute. Overall, the "Steps of a stabilization Plan" by Selverston and Thorne (p. 29) should be followed.

b. Any physical or operational changes:
☐ Yes **likely—land management changes specific to each situation**
☐ No ☐ Unknown
If Yes, Please explain: _____
Each site must be assessed for action. Such actions can change day-to-day operations in some locations, as with boating control, monitoring, law enforcement patrol, etc.

c. Proposed start date and duration
Start (month/yr): immediately due to continuing site losses. Some assessment and work will be contingent on lake level fluctuations_____
Duration (month(s)/yr(s)): _____ongoing over the life of the reservoir due to monitoring and upkeep. Most immediate stabilization projects should occur over the next 2-5 years as an estimate

d. Location (within FERC boundary/outside FERC boundary)
☐ Inside xx ☐ Outside within projected APE which is presumably larger than FERC boundary ☐ Don't know
Please specify possible location(s) referring to the linked map (http://orovillerelicensing.water.ca.gov/maps.html), or providing a map as appropriate: _____Locations are throughout the Lake Oroville area as identified by consultants but primarily where there are water fluctuations due to facility operation and areas of looting and OHV damage. Locations documented from the inventory will have to be individually assessed.

e. Please provide alternative potential Resource Actions for addressing the same resource goal and/or Project 2100 effects referring to the linked map, or providing a map as appropriate: _____
Data recovery may be the only reasonable alternative due to higher costs for stabilization or situations not suitable for stabilization. This may have be a phased approach---if one method does not work, try the next method.
☐ Unknown

f. Describe the methods for measuring the goals and performance of the Resource Action or methods for evaluating success against the known resource goal(s): _____
Continued monitoring of site stabilization and performing necessary repairs, upgrades, or alternate approaches (data recovery as a last resort)
☐ Unknown

g. Describe the feasibility of the Resource Action: _____
Quite feasible but partly dependent on lake level fluctuations and time of year
☐ Unknown

h. Please mark the applicable Working Groups that would be involved in the implementation of this Resource Action:
☐ xLand Use and Management
☐ xRecreation & Socioeconomics
☐ xCultural Resources
☐ xEngineering and Operations
☐ xEnvironmental

3. Contact Information for Submitter(s) & Alternate Contact:

a. Organization name: _____
b. Preparer's name, phone number and e-mail address: _____
Eric W. Ritter, BLM, 355 Hemsted Drive, Redding, CA 96002 530-224-2100

c. Secondary contact person, phone number and e-mail address: _____
Adrian Smith

d. Date prepared: _____
9/16/03
e. Organization(s) represented by submitter: _____
Bureau of Land Management

Please fill out the following questions to the best of your ability, understanding that you may not have this information or it may not be available.

4. Resource Goals:

a. Identify and describe the resource goal the Resource Action is related to, providing reference to the resource goal number(s) described, as appropriate: _____

☐ Unknown

b. Explanation of how the Resource Action furthers that goal: _____

☐ Unknown

5. Identify the Resource Issue/Relationship to Project and Relicensing

a. Describe the issue the Resource Action is intended to address, referring as appropriate to Issue Statement(s) number(s):

☐ Unknown

b. Describe the relationship between the Resource Action and the project, including any project impacts the Resource Action is intended to address:

☐ Unknown

c. Identify any comprehensive plans that this Resource Action is related to:

see Selverston and Thorne report

☐ Unknown